EFFECTIVENESS OF MINT EXTRACT UPON DYSMENORRHEA AMON THE ADOLESCENT GIRLS IN SELECTED SCHOOL AT ACHARAPAKKAM, KANCHIPURAM DISTRICT.

By

Miss. L.INDUMATHI

A Dissertation submitted to

THE TAMILNADU Dr.M.G.R MEDICAL UNIVERSITY,

CHENNAI.

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL- 2012

CERTIFIED THAT THIS IS A BONAFIDE WORK OF

Miss.L.INDUMATHI

ADHIPARASAKTHI COLLEGE OF NURSING

MELMARUVATHUR-603 319.

SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT

FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

FOR THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY,

CHENNAI – 600 032.

COLLEGE SEAL

SIGNATURE _____

Dr.N.KOKILAVANI ,M.Sc.,(N), M.A.,M.Phil.,Ph.D.,

PRINCIPAL,
ADHIPARASAKTHI COLLEGE OF NURSING,
MELMARUVATHUR – 603 319,
KANCHIPURAM DISTRICT,
TAMIL NADU.

EFFECTIVENESS OF MINT EXTRACT UPON DYSMENORRHEA AMON THE ADOLESCENT GIRLS IN SELECTED SCHOOL AT ACHARAPAKKAM, KANCHIPURAM DISTRICT.

By

Miss. L.INDUMATHI

M. Sc., (Nursing) Degree Examination,

Branch – III, Obstetric and Gynaecological Nursing,

Adhiparasakthi College of Nursing,

Melmaruvathur – 600 002.

A Dissertation submitted to

THE TAMIL NADU Dr. M.G.R.MEDICAL UNIVERSITY, CHENNAI

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR

THE DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL – 2012

EFFECTIVENESS OF MINT EXTRACT UPON DYSMENORRHEA AMON THE ADOLESCENT GIRLS IN SELECTED SCHOOL AT ACHARAPAKKAM, KANCHIPURAM DISTRICT.

Signature……

Dr. N. KOKILAVANI, M.Sc.(N).,M.A.,M.Phil.,Ph.D.,

PRINCIPAL AND HEAD OF THE DEPARTMENT – RESEARCH,

ADHIPARASAKTHI COLLEGE OF NURSING,

MELMARUVATHUR - 603 319.

Signature……

Dr. K. SIVAN KUMAR.,M.D,D.G.O

PROFESSOR, HEAD OF THE DEPARTMENT OF OBSTETRIC AND GYNAECOLOGY,

MAPIMS,

MELMARUVATHUR.

Signature……

Prof.S.SHENBAGAVALLI, M.Sc., (N).

HEAD OF THE DEPARTMENT – OBSTETRIC AND GYNAECOLOGICAL NURSING,

ADHIPARASAKTHI COLLEGE OF NURSING,

MELMARUVATHUR - 603 319.

A DISSERTATION SUBMITTED TO

THE TAMILNADU Dr.M.G.R. MEDICAL UNIVERSITY, CHENNAI

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING,

APRIL -2012

EFFECTIVENESS OF MINT EXTRACT UPON DYSMENORRHEA AMON THE ADOLESCENT GIRLS IN SELECTED SCHOOL AT ACHARAPAKKAM, KANCHIPURAM DISTRICT.

By

Miss. L.INDUMATHI

M.Sc., (Nursing) Degree Examination,

Branch-III Obstetric and Gynaecological Nursing,

Adhiparasakthi College of Nursing,

Melmaruvathur – 603 319.

A Dissertation submitted to **THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY, CHENNAI** in partial fulfilment of the requirement for the Degree of **Master of Science in Nursing** ,**April-2012.**

_____ _____

Internal Examiner **External Examiner**

ACKNOWLEDGEMENT

My most heartfelt gratitude is articulated to **HIS HOLINESS, ARUL THIRU AMMA**, **Founder-President** Adhiparasakthi Charitable, Medical, Educational and Cultural Trust, Melmaruvathur for lavishing his blessings and grace on me during my study period.

I am grateful to **THIRUMATHI LAKSHMI BANGARU ADIGALAR, Chief Executive Officer,** Adhiparasakthi Charitable, Medical, Educational and Cultural Trust, Melmaruvathur, who helped me in making the dissertation a great success.

With great respect and honour, I extend my thanks to our beloved **SAKTHI THIRUMATHI B.UMADEVI., M.Pharm.,Ph.D.,** correspondent, Melmaruvathur, Adhiparasakthi Institution Of Medical Science And Research for her excellence in providing skillfull and compassionate sprit of unstinted throughout the study.

I feel pleasure to extend my gratitude and sincere thanks to **Dr. N.KOKILAVANI, M.Sc.(N),M.Phil.,Ph.D., Principal, Head Of The Department-Research,** Adhiparasakthi College Of Nursing, Melmaruvathur for her patience and her excellent guidance, without whom this study would not have molded in this

shape. Her rich professional experience and efficient guidance helped me to step cautiously in the right direction.

I wish to express my heartfelt gratitude to **Dr.K.SIVAN KUMAR, M.D,D.G.O.,** professor, Head of the department, Obstetrics and Gynaecology, Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research**,** for the encouragement and support throughout my study.

I wish to express my sincere thanks to **Dr.C.SUSILA,M.Sc.(N).,Ph.D., Principal,** Billroth College of Nursing, chennai, for the content validity and valuable suggestion for this study valuable support to frame the study in a right way and this to a fine shape.

I sincerely grateful for her motherly care and approach towards me throughout the study. **Prof.B.VARALAKSHMI, M.Sc.(N).,M.Phil., Vice Principal**, **Head of the Department - Pediatric Nursing,** Adhiparasakthi College of Nursing, Melmaruvathur for her expert advice, valuable guidance which enlightened my path to complete the work systematically and helped me to complete my study.

I feel pleasure to extend my gratitude and sincere thanks to **Prof. B.SHEEBA, M.Sc (N), M. Phil, Head of the department – Psychiatric nursing**, Adhiparasakthi College of Nursing, Melmaruvathur for her constant support, patience, encouragement and guidance to complete this study

I acknowledge my deep sense of heartfelt thanks to **Prof. S.SHENBAGAVALLI, M.Sc.(N)., Head of the department-Obstetrics and Gynaecological Nursing**, Adhiparasakthi College of Nursing, Melmaruvathur, for her suggestions, affectionate, patience ,enduring support to complete my study

I acknowledge my deep sense of heartfelt thanks to **Ms. S. SHAKILA**, **M.Sc.(N),** Reader, Adhiparasakthi College of Nursing, Melmaruvathur, for her suggestions to complete my study.

I acknowledge my sincere thanks to **Mrs. V. VASANTHA LAKSHMI,M.Sc(N).,** Lecturer, Adhiparasakthi College of Nursing, Melmaruvathur, for her suggestions to complete my study

I wish to express my sincere thanks to **Mrs.V.SHIRLEY SATHYA, M.Sc(N),** Lecturer, Adhiparasakthi

College of Nursing, Melmaruvathur for her guidance throughout this study.

I wish to extend my thanks to **Mr. ASHOK M.Sc., M.Phil.** Lecturer in Biostatistics, Adhiparasakthi College of Nursing, Melmaruvathur, for his assistance in statistical analysis and making the dissertation in a great success.

I feel pleasure to wish extend my thanks to **Mr. A. SURIYANARAYANAN, M.A., M.Phil.,** Lecturer in English, Adhiparasakthi College of Nursing for his assistance and great support in this study.

I wish to express my gratitude to **MR.A.CHANDRAN, LIBRARIAN,** Adhiparasakthi College of Nursing, Melmaruvathur for permitting me to utilize the books, dissertations and journals for my study.

I would like to thank all the **TEACHING FACULTY**, Adhiparasakthi College of Nursing, Melmaruvathur for their help during the study.

I wish to express my sincere thanks to Principal, Govt Girls Higher Secondary School at Acharapakkam. for his guidance throughout this study.

I wish to express my sincere thanks to **DR.SABAPATHY, DNYSS, RIMP.** Department of herbal medicines, chennai. for his enduring support, valuable guidance which enlightened my path to complete the work systematically and helped me to complete my study.

I would like to thank all the **NON TEACHING STAFF**, Adhiparasakthi College of Nursing, Melmaruvathur for their help during the study.

I would like to thank to **THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY LIBRARY** for reference books and journals for my dissertation.

Finally I wish to thank one and all, who are directly or indirectly responsible for the successful completion of the work with reverence and sincerity I thank God for his abundant grace, love, wisdom, knowledge, strength and blessings in making this study towards its successful and fruitful outcome.

LIST OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER- I

INTRODUCTION

An amazing moment in the life of a female is menarche. It is the stage where it crowns the female gender. A moment to cherish only turn to be a torment with the commencement of periods start pain,mood swings at times inconvenience and humiliation. Instead of feeling blessed, women only dread this experience crying out " I hate getting my period''

The term adolescent is derived from the latin word, "**ADOLESCENT"** meaning **'TO GROW UP', 'TO MATURE',** developmentally this allows achieving an identity.

Adolescent is a period extending from puberty to early adulthood and considered as a part and extension of the teenage years in girls, menarche is a major event in the dramatic process of pubertal changes. Several changes in the physiology as well as in the personal and social world occur as the young grows.

Adolescent stage is the golden period of investment of health to build a healthy and wealthy India. Fifty percent of girls suffering from dysmenorrhea. The first menstrual period is called menarche. It usually starts between the age 11 and 14years .But it can happen as early as in the age 9 to 15years.

The term dysmenorrhae is derived from greek word

Dys - Difficulty

Meno - Month

RrHeoe - flow

Normal menstruation requires integration of the hypothalamic pituitary ovarian axis with functional uterus of patent lower genital outflow tract and a normal genetic karyotype of 46xx.

Primary :- From the beginning to life long, severe and frequent menstrual cramping caused by severe and abnormal uterine contraction. It affects more than 50% of post pubescent women in the age group of 18-25 years.

Secondary :- Due to some physical cause and usually of later onset, painful menstrual period caused by another medical condition in the body, i.e.pelvic inflammatory disease, endometriosis, fibroids, adenomyosis.

The pain begins with the onset of menstruation and persists throughout the first one to three days. The physiological symptoms includes fatigue, malaise, nausea, vomiting, back pain, headache and diarrhea. Psychological symptoms are depression, tension, anger, nervousness, irritability and loss of motivation.

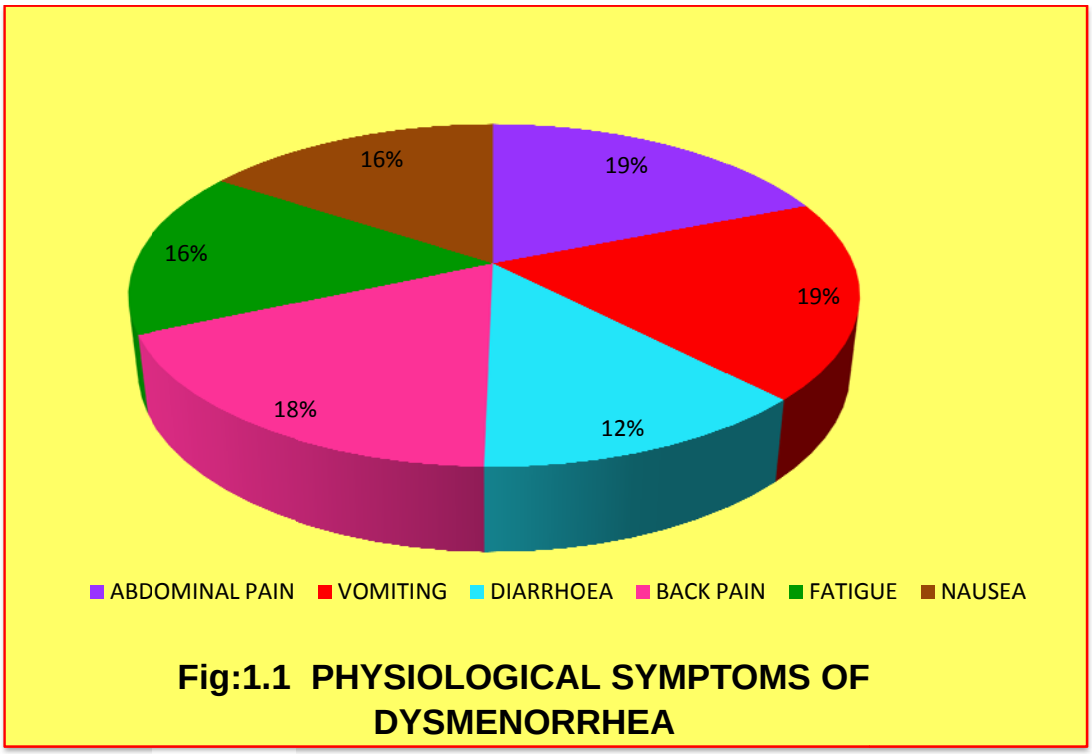


Fig:1.1 PHYSIOLOGICAL SYMPTOMS OF DYSMENORRHEA

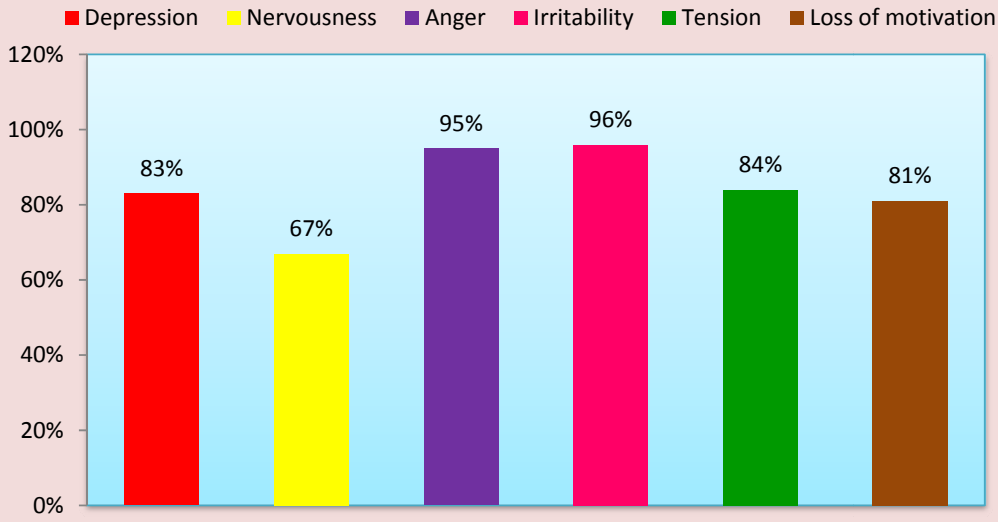


Fig:1.2 PSYCHOLOGICAL SYMPTOMS OF DYSMENORRHEA

Source:Ezine article.com (2010)

Lowdermilk.N., (2009) reported that dysmenorrhea is the most common gynaecological problem in women in all ages. Most adolescence experience dysmenorrhea in the first three years after menarche. Young adult women are most likely to report painful menses between age of 17 to 24 years. 50%- 80% of women report some level of discomfort with menses and 10% of women have severe pain which interfere with their functioning for one to three days in a month.

Harel.Z.,(2006) suggested that dysmenorrhea in adolescents and young adults is usually primary, is associated with normal ovulatory cycles and with no pelvic pathology. Approximately 10% of adolescents and young adults with severe dysmenorrhea symptoms, pelvic abnormalities such as endometriosis or uterine anomalies may be found. Potent prostaglandins and potent leukotrienes play an important role in generating dysmenorrhea symptoms.

Menstrual cramps, or dysmenorrhea, affect many womens in each month. They can be extremely painful and debilitating, though they typically only last for 24 to 48 hours after the start of the period. There are many home remedies for menstrual cramps that can help to relieve the pain.

One of the best home remedies for menstrual cramps is an over-the-counter anti-inflammatory drug. These can help to relieve the pain as well as to prevent the nausea and diarrhea that often accompany with menstrual cramps. It is best to take the anti-inflammatory as soon as the pain begins to head it off to reduce.

Heat is another one of the best home remedies for menstrual cramps. Placing a heating pad or warm compress on the abdomen or taking a hot bath can make a big difference, and can help to relax the muscles and relieve pain. Drinking hot tea can also help with the pain. Some people say that ginger root tea is quite helpful, and can also help to relieve nausea. For some people, caffeine may help to relieve symptoms, while it may worsen symptoms in others; this is an individual preference that must be determined.

Several non pharmacological approaches available to alleviate dysmenorrhea difficulties. It includes homeopathy, acupuncture, relaxation techniques and exercise other solution include heat pad or hot bath which minimize cramping by increasing vasodialation, muscle relaxation and minimizing uterine ischemia. Massaging the lower back can reduce pain by relaxing para vertebral muscles and increasing blood supply. Soft rhythmic

rubbing of the abdomen as it provides distraction and an alternative focal point in reducing pain during dysmenorrhea. Certain herbs like blackhaw, black cohosh, raspbeery leaves, chastebeery, moringa oleifera, similarly mint leaves.

Panda., (2009) described that mint leaves has been found to relieve the menstrual discomfort by relaxing the uterine muscles. Leaves and their volatile oil are aromatic, stimulant, carminative and anti-spasmodic. This is also used in case of vomiting, gastric colic, cholera, diarrhea and also in dysmenorrhea together with tea.

PUDINA [MINT]

The entire plant is antibacterial and antifibril. It yields essential oil and menthol which exert, through their rapid evaporation, slightly anaesthetic, and anodyne local effect. It is effective in headache, rhinitis, abdominal pain, cough, sore throat, colic, and vomiting. Menthol obtained from this is used in balm. The fragrant mint has a distinct aroma liked by all. This **wonder herb** does more than just emit good **aroma**. Mint was so revered by the ancient Greeks that they named the plant after the mythical character Mint. According to greek myth, Minthe or Menthe as she

is also known, was a river nymph. It is also said that the Chinese used mint to combat spasms and cure menstrual pain.

There are many other types of mint includes that are applemint, water mint, horsemint, pineapple mint, orange mint, pennyroyal and spearmint. Pennyroyal is toxic if taken internally, causing severe liver damage, but it can be rubbed onto the skin to repel insects and prevent them from biting.

THE NUTRITIONAL VALUE OF MINT

Mint contains a number of vitamins and minerals, which are vital to maintain a healthy body. Mint is rich in Vitamin A and C and also contains smaller amounts of Vitamin B2. Although mint may be consumed in small quantities, the vital nutrients obtained are still beneficial to one's health. Mint also contains a wide range micro nutrients such as manganese, copper, iron, potassium and calcium.

MINT (MENTHA SPICATE)

INDRA,(2009) reported that composition of each 100mg of mint contain moisture 83%, protein-4.8g,fat -0.6g,fibre -2.0g, carbohydrate -8.0, calcium-200mg, potassium -0.08g, iron -15.6mg, vitamin27%, folic acid114.0g, niacin -1.0mg, riboflavin -0.26mg, thiamine -0.05mg, copper-0.18mg,zinc -0.44mg, chloride-34mg, manganese -0.54mg, sodium -34mg.

Fast home remedies

There are number of fast and simple home remedies for menstrual cramps are,

- Drink something hot
- Apply a hot compress on stomach or back
- Take a hot bath
- Drink more water
- Exercise
- Get more sleep
- Avoid junk food
- Eat more fruits and vegetables.

THE MEDICINAL PROPERTIES OF MINT

- Mint leaves help in stimulating menstruation in those who are suffering from dysmenorrhea.
- Act as a powerful antioxidant, protecting the body against the formation of cancerous cells.
- Inhibit the growth of many different types of bacteria and fungus.
- Ease and unblock the breathing and respiratory passages and airways.
- Mint relieves congestion, colds and headaches, abdominal pain relieve minor aches and pain such as muscle cramps and sprain.
- Mint is a very good cleanser for the blood and combat breath.
- Mint tea can help clear up skin disorders such as acne.

Need for the study

Dysmenorrhea is a common gynaecological disorder affecting as many as 50% of menstruating women. It usually appears one to two years after menarche, when ovulatory cycles are established. This disorder affects younger women but may persist up to 40years of age.Three are the main prostaglandin concerned with menstruation are PGF2, PGE2,PGI2 causing dysmenorrhea.

Gulani. K.K., (2011) stated that Global adolescents account for one fifth of the population that is more than one billion. Four out of five adolescents live in developing countries. According to Population Bureau in 1996, 30% of the total population was that of adolescents (284.02 million).Due to gradual decrease in the growth rate of the over all population, there is little increase in the number of adolescents in population projections till the year 2016 (Population projection 1996-2016) census of India.

Chauduri.S., (**2010)** conducted a study, with the age group of 13-15years followed by 17-18years ,respectively affected by dysmenorrhea 67.3% were the commonest problem in women suffering from menstrual pain. Women with 63.3% had other symptoms of pre menstrual symptoms. Daily routine 60% girls

were affected due to prolonged bed rest, missed social activities,disturbed sleep and appetite.

Ozerdogen.N.,(2009) conducted a study on prevalence and predictors of dysmenorrhea among student at a university in turkey. The prevalence of dysmenorrhea was 55.5% risk of dysmenorrhea was approximately 1.5 times higher in women with satisfactory spending allowance, 3.5times higher in women with a family history of dysmenorrhea. 1.5times higher in women who were under weight, 1.5 times higher in women with smoking.

Cakir.D., et al.,(2008) conducted a study to find out the prevalence of dysmenorrhea and its effect on social activities and school attendance among 480 females students between the age group of 17years. The study result shows that prevalence of dysmenorrhea is 89.5%. The subject with severe dysmenorrhea is about 10% and they were found that in more school absenteeism and need to consult a physician.

Locke.R., et al.,(2009) found that exercises like pelvic rocking exercise is recommended as better choices in reducing the severity of the primary dysmenorrhoea. Several non pharmaceutical approaches to alleviate dysmenorrhoea exist. These include homeopathy (eg.belladona and chamomilla),

acupuncture, biofeedback, relaxation techniques, massage, exercise, aromatherapy (e.g. rose oil) and the use of certain herbs. Exercise has been found to relieve menstrual discomfort through increased vasodilatation and subsequent decreased ischemia, release of endogenous opioids, specially beta-endomorphins, and suppression of prostaglandins and shunting of blood away from the viscera, resulting in the pelvic congestion. Specific exercises that nurses can suggest include pelvic rocking exercise and heels-over-the head yoga position.

Davis.T., (2008) studied on self treatment pattern among adolescent girls with dysmenorrhea showed that dysmenorrhea was moderate in (42%) severe in (58%) associated with nausea in (55%) and associated with vomiting in (24%). Among the adolescent girls,46% reported missing college one or more days monthly due to dysmenorrhea. All used at least one medication, 31% reported using 2medicine. They concluded that cyclic therapy could be conservative anti-dysmenorrhea therapy for endometriosis and adenomyosis patient who decide pregnancy.

Nursing time (2007) surveyed about the dysmenorrhea pain during menstruation affects 40-90% of women and has been reported as the most common causes of regular absenteeism

among young women, with two types of dysmenorrhea, primary and secondary.

Health (2006) described that more than 50% of all women experiencing painful menstrual cramp.It has also reported by senior obsterician that probably 5-10% of girls in their late teenage suffer from severe spasmodic dysmenorrhea interpreting their educational and social life.

Mint leaves have been found to relieve the menstrual discomfort by relaxing the uterine muscles. The prostaglandin inhibition is a key action for relieving cramp, the natural therapies that promote prostaglandin balance, with magnesium or essential fatty acids may be helpful.

STATEMENT OF THE PROBLEM

EFFECTIVENESS OF MINT EXTRACT UPON DYSMENORRHEA AMON THE ADOLESCENT GIRLS IN SELECTED SCHOOL AT ACHARAPAKKAM, KANCHIPURAM DISTRICT.

OBJECTIVES OF THE STUDY

- to assess the health status of adolescent girls with dysmenorrhea.
- to evaluate the effectiveness of mint extract on dysmenorrhea among the adolescent girls.
- to find out the association between effectivesness of mint extract on dysmenorrhea with selected demographic variables.

OPERATIONAL DEFINITIONS

EFFECTIVENESS

In this study it refers to the outcome of mint extract upon dysmenorrhea among adolescent girls.

DYSMENORRHEA

- Dysmenorrhea refers to the painful menstruation.
- In this study it refers to the cramp pain that being before or shortly after onset of menstrual flow and continues to 48-72hours. It accompanies with associated symptoms like nausea, vomiting, fatigue and lower abdominal pain.

MINT EXTRACT

It was prepared by boiling the water up to 10-15min and add the mint leaves in it then filter the extract and add a pinch of

salt, which can administered twice a day for seven consecutive days.

ADOLESCENT GIRLS

It refers to the school girls, who had attained the menarche and between the age group of 12-17years at Govt Girls Higher Secondary School at Acharapakkam.

DELIMITATIONS

- The data collection is limited to six weeks.
- Limited only to adolescent girls who all are having dysmenorrhea.
- The study was limited only to adolescent girls studing in Govt girls school at Acharapakkam.

ASSUMPTION

- Adolescent girls are at risk for dysmenorrhea.
- Mint extract will reduce the dysmenorrhea.
- Participants will cooperate with the investigator during the study.

HYPOTHESIS

- **H01** There will be significant difference between the pre test and post test level of pain, symptoms during dysmenorrhea in control and experimental group.

- **H02** There will be significant association between the effectiveness of mint extract on dysmenorrhea with selected demographic variables.

PROJECTED OUTCOME

- The study will help the adolescent girls in improving the symptoms of dysmenorrhea.
- This can also reduced the health care cost to a marked extent.
- It will help the health personnel to conduct further research studies about mint extract in treating dysmenorrhea.

CONCEPTUAL FRAMEWORK

Conceptual framework is a network of inter related changes that provide a structure for organizing and describing the phenomenon of interest. Research studies based on the theoretical or conceptual framework that facilitates visualizing the problem and places the variable in a logical context.

The framework in this study was based upon modified Wiedenbach (2011) nursing art theory with the concept of observation, administering help, and validation. In Wiedenbach's nursing arts, the three steps are comparable with nursing process phases of assessment, implementation and evaluation.

According to Wiedenbach, nursing is based on goal directed care. It consists of three steps

Step 1- observation.

Step2 – ministering help.

Step 3 – validating the need for help was met.

Observation

The first phase of observation considers the person holistically and requires extensive data collection. Here the

investigator explores with adolescent girls experienced symptoms of dysmenorrhea. It includes the following components,

- General information:

  This comprises of the inclusion and exclusion criteria proposed for the selection of sample and demographic variable.

- Central purpose:

  Central purpose is to reduce the dysmenorrhea on adolescent girls.

- Prescription:

  It includes the intervention prescribed to meet the central purpose .(mintextract)

  In this study assessment for symptoms on dysmenorrhea, With various demographic variables like age, religion , type of family, length of menstrual cycle, family history of dysmenorrhea, the number of pads changed per day and weight in kilograms.

MINISTERING HELP

Here the investigator formulates and implement the plan. This include a component called reality which includes four components,

- Agent:

The investigator acts as an agent to render the need help.

- Recipient:

The adolescent girls with dysmenorrhea.

- Goal:

The goal is to improve the health status of adolescent girls with dysmenorrhea.

- Facilities:

It denotes the setting where the help is rendered.(Govt.girls higher secondary school.)

Administration of 100ml of mint extract twice a day.

VALIDATION

It validates the needed help that delivered in achieving the central purpose.In this study indicates the effectiveness of mint extract upon dysmenorrhea and it is measured in terms of grading as mild,moderate,severe health status.

FEEDBACK

It enables to regulate itself and provides information about the validation.It will help to identify the effect and consequences.In this study the feeback indicates the effectiveness on mint extract.

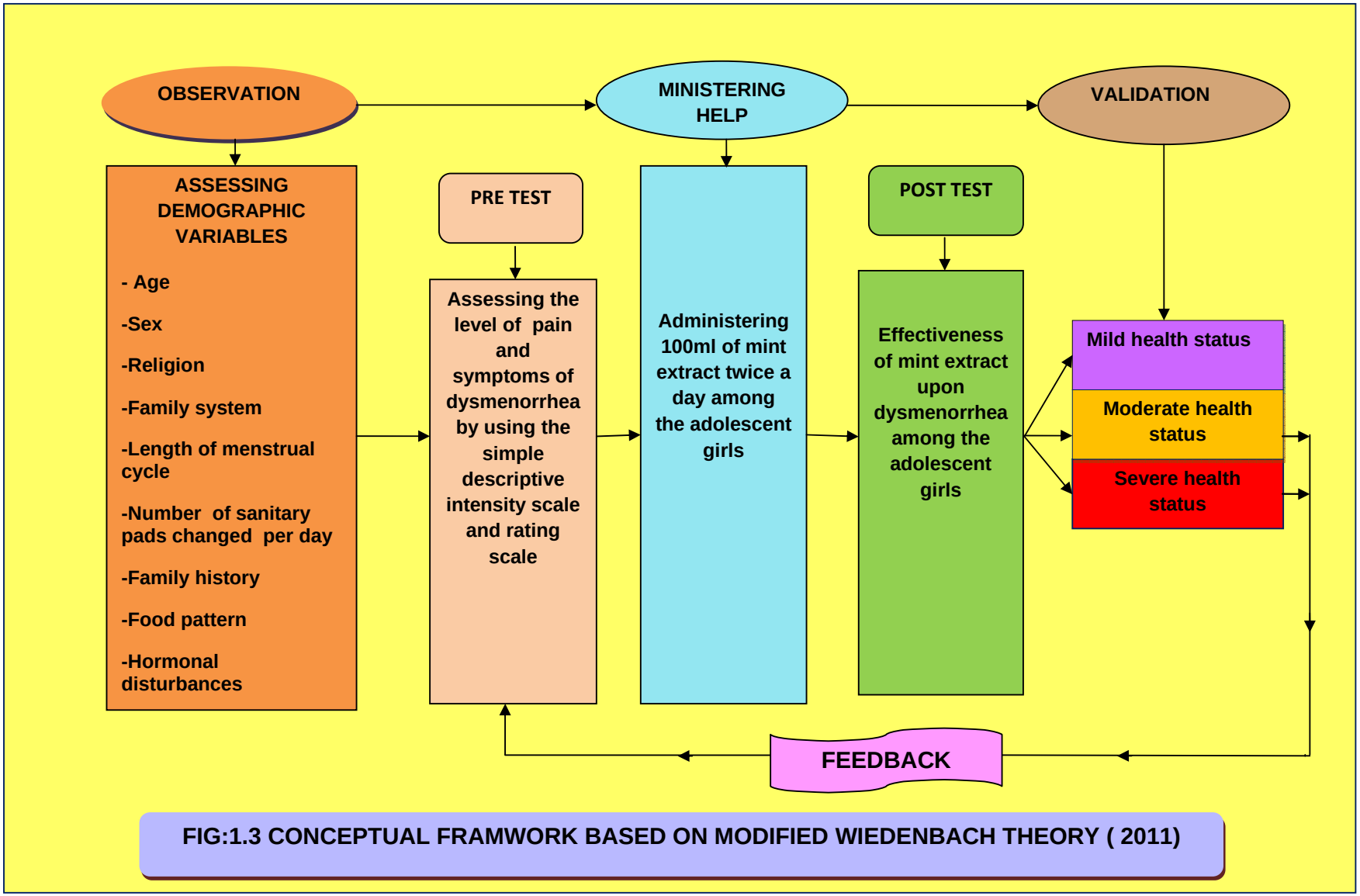


FIG:1.3 CONCEPTUAL FRAMWORK BASED ON MODIFIED WIEDENBACH THEORY (2011)

CHAPTER-II

RIEVIEW OF LITERATURE

POLIT AND HUNGLER (**2007**) defined that “a literature review involves the systematic identification, location and summary of writers materials that contain information of a research problem”.

PART I : LITERATURE RELATED TO PREVALENCE OF DYSMENORRHEA

PART II : LITERATURE RELATED TO ALTERNATIVE THERAPY ON DYSMENORRHEA

PART III: LITERATURE RELATED TO MINT EXTRACT UPON DYSMENORRHEA.

Dysmenorrhea may begin soon after the menarche after which it often improves with age or it may originate in life after the onset of an underlying causative condition. Dysmenorrhea is common, up to 20% of woman, it may be severe enough to interfere with daily activities.

I. LITERATURE RELATED TO PREVALENCE OF DYSMENORRHEA

Unsal. A., et al., (2010) conducted a cross sectional study to evaluate the prevalence of dysmenorrhea and determine its effect on health-related quality of life among 623 female students, the severity of dysmenorrhea was determined with a 10-point visual analog scale. The average age of the study group was 18-20 years. Prevalence of dysmenorrhea was found to be72.7% were significantly higher in coffee consumers, with menstrual bleeding duration is more than 7 days, and a positive family history of dysmenorrhea when compared to the others.

Zafettas.N., (2010) mentioned that prostaglandin seems to be intimately involved in primary dysmenorrhea although it is difficult to understand the underlying cause for their excessive secretion. Abnormalities in plasma steroid level could account for the disturbance especially significantly elevated plasma level of estradiol in the luteal phase. Plasma levels of vasopressin appears to be higher in women with dysmenorrhea suggesting a possible etiological role in the uterine prostaglandin synthesis

Okusanya.B.O., (2009) conducted a prospective questionnaire based study on prevalence of dysmenorrhea and

associated factors among undergraduates in a Nigerian University. Cluster sampling technique was used.The result shows that the prevalence of dysmenorrhea was 76.3%. The mean age at menarche was 13-18 years. Daily activity was affected by dysmenorrhea in 35% of respondents while 68% of those with dysmenorrhea did not seek any help.

Polat .A, et al., (2009) conducted a study to determine the prevalence of primary dysmenorrhea and attitude towards dysmenorrhea. A total of 1,266 female students were surveyed by doctors. Mean age of the students was 21.02 ± 2.13 years, mean age of menarche was 13.3 ± 1.4 years and frequency of menstruation was found to be 32.58 ± 19.8 days. The study concluded that 45.35% were found to suffer from pain in each menstruation, 42.5% in some menstruation and 12.2% in none, 66.9% were established to take analgesic drugs.

Olabisi .M.L, et al., (2008) conducted a study to assess 409 students for dysmenorrhea and to identify the prevalence of dysmenorrhea. The prevalence of dysmenorrhea was 53.3% and most of them experienced pain during the onset of menses, and about half of them reported that dysmenorrhea interfere with the daily activities. This study suggested the health

care providers to screen routinely and offer treatment for dysmenorrhea.

Sharma.P., (2007) conducted a study to identify the problem related to menstruation among adolescent girls and their effect on daily routine. Among 198 adolescent girls (35.9%)are in the age group of 13-15 years,felt that dysmenorrhea (67.2%) was the commonest problem. About 60% girls daily routine was affected due to dysmenorrhea, 17.24% had missed classes and abstain from work.

Widholm, kante.S, (2008) observed that the frequency of dysmenorrhea among 13 to20years old ranged from 36% to 58%,with on over all absence rate of 23.45%.This study noted that a significant number of adolescent suffered from dysmenorrhea didnot seek help from health care professionals for the problem.

James patelv et al.,(2007),conducted a cross sectional survey in India among women who attended primary center to describe the prevalence and determinants of dysmenorrhea. The most common menstrual complaints in community among the subject survey 95% reported moderate to severe dysmenorrheaha and 5% are reported with other complaints of dysmenorrhea.

Albert French., (2007) mentioned that dysmenorrhea is the leading cause of recurrent short term school absence in

adolescent girls and a common problem in women of reproductive age. He concluded that the risk factors for dysmenorrhea are nulliparity, heavy menstrual flow, smoking, and depression.

Rostami.M., (2006) estimated that the correlation between the prevalence and of dysmenorrhea and relevant biological and social variables ($p<0.05$) among 660 high school girls and found 14.4% of participants had dysmenorrhea and found no improvement after the use of analgesics. There was a significant correlation between age at menarche and severity of dysmenorrhea and duration of menstrual flow. It was identified that early age of menarche was related to severity of dysmenorrhea.

Johnson.T, (2004) stated in his book ‘’women’s health care hand book’ that dysmenorrhea affects half of all adolescent and is the leading cause of periodic school absenteeism. It is estimated that 140million hours of work and school time is being missed by United States because of dysmenorrhea.

Babi.C,et al.,(2004)conducted a study to investigate the prevalence of primary dysmenorrhea and its relationship with menstrual factors and dietary habits by survey method. Among 356 females with the age group of 10 -16 years, through interview method menstrual history, dietary habits and information about

pain were collected. It shows the association of dietary habits on dysmenorrhea.

Banikarim. R, et al., (2005) conducted a study to find the effective treatment modalities for dysmenorrhea and the result showed that among 85% of adolescents with dysmenorrhea various treatments taken for dysmenorrhea included rest (58%) medications (52%)heating pad (26%) tea (20%) exercise (15%) and herbs (7%) 14%of adolescents consulted physician and49% approached a school nurse for help. Menstrual pain was significantly associated with school absenteeism and decreased academic performance (P<0.01)**.**

II. LITERATURE RELATED TO ALTERNATIVE THERAPY FOR DYSMENORRHEA

Nahid. K, et al., (2009) conducted a study to examine the effect of Iranian herbal drug in the treatment of primary dysmenorrhea. A randomized double- blind, placebo controlled pilottrial among 180 female students at Isfahan university dormitory aged 18-27 who suffered from primary dysmenorrhea was undertaken. There were statistically significant reductions in pain scores in the groups that took Saffron, celery seed and anise extracts (p< 0.001) and mefenemic acid(P<0.01). The decrease in

pain scores was reflected by a significant reduction in other drug use among the treatment groups compared with the placebo group. Both drugs effectively relieved menstrual pain compared to placebo.

Hansh.L, et al., (2005) conducted a study to know the effect of aromatherapy on symptoms of dysmenorrhea in college students.The subjects were randomized into three groups 1)an experimental group (n=25)who received aromatherapy2)a placebo group (n=20) and (3) a control group (n=22). Aromatherapy was topically applied to experimental group in the form of massage of two drops of lavender &one drop rose 36 oil and 5cc of almond oil, from the multiple regression aromatherapy was found to be associate changes in menstrual cramp levels.

Proctor., (2004) conducted a study to assess the spinal manipulation therapy. Manipulation of these vertebra increases spindle mobility and may improve pelvic blood supply .The study suggested that spinal manipulation is effective in the treatment of primary and secondary dysmenorrhoea.

Connell .k, et al., (2006) conducted a study to assess the both non-pharmacologic and pharmacologic treatments used by adolescents with dysmenorrhea. A study shown that

adolescents with moderate and severe dysmenorrhea reported high morbidity girls, used numerous non-pharmacologic remedies as well as medication for pain but infrequently accessed formal medical care

Jun E.M, et al., (2007) stated that the effects of acupressure on dysmenorrhoea and skin temperature changes in college students. Acupressure to the spleen meridian (SP6) can be an effective non-invasive nursing intervention for alleviation of primary dysmenorrhoea, with effects lasting two hours post treatment.

Han.H, et al., (2006) revealed that the effect of aromatherapy reduced the symptoms of dysmenorrhoea in college students. Aromatherapy using topically applied lavender, clarysage, and rose is effective in decreasing the severity of menstrual cramps. Aromatherapy can be offered as part of the nursing care to women experiencing menstrual cramps or dysmenorrhoea.

Eryilmaz.G, (2009) Concluded that dysmenorrhoea was experienced by 81.7% of women, it mostly occurred during the first 1-3 years (65.6%). Pain was mostly initiated a day before (38.8%) or at the beginning of (45.8%) menstrual flow and lasted for 1-3 days.

Ozgoli .G, et al., (2009) conducted a study to compare the effects of ginger, mefenemic acid, and ibuprofen on dysmenorrhea among 150 students from medical universities and they were divided into three groups. A verbal multi dimensional scoring system was used for assessing the severity of dysmenorrhea. After the treatment mentioned the severity of 31% of dysmenorrhea decreased in all the three groups and no difference was found between the groups ($P<0.05$).

Lakshmi.W., (2008) conducted a study to evaluate the effectiveness of pelvic rocking exercise on dysmenorrhea among 31 school girls by simple random technique and used visual analogue scale .The findings revealed that the dysmenorrhea was reduced significantly after practicing of pelvic rocking exercise $t= 8.26$ ($P<0.05$).

Oya.A., (2008) conducted a retrospective study to identify the clinical efficacy of kampo medicine in the treatment of dysmenorrhea among 176 samples with dysmenorrhea. Severity of the dysmenorrhea was noted among 108 samples before and after Kampo treatment. The severity was reduced after kampo treatment ($P<0.0001$).This Japanese herbal drug was used for the treatment of dysmenorrhea.

Proctor. M, et al., (2007) evaluated the behavioural intervention for dysmenorrhea among 213 women and assessed the trial quality and extracted the data. One trial of pain management training reported reduction in pain and symptoms compared to a control. Second trials reported less restriction in daily activities following treatment with either relaxation of pain management training compared to a control. Third trial also reported less time absent from school following treatment with pain management training compared to a control.

Jia .W, et al., (2006) conducted a study to evaluate the common traditional Chinese medicinal herbs for dysmenorrhea. This study explains the treatment of dysmenorrhea through the use of combination-herbal-formula therapeutics. These herbal treatments are effective for dysmenorrhea with minimal side effects. Pharmacological studies suggest Chinese herbal dysmenorrhea therapies likely decrease prostaglandin levels, modulate nitric oxide, increase plasma *β*-endorphin levels, block calcium-channels and improve microcirculation.

Deutch.B, et al., (2005) conducted a double blind placebo controlled trial on menstrual discomfort in Danish women reduced by dietary supplements of omega 3 with B12,were given for three months. There was significant reduction in the

dysmenorrhea and their interference with the daily activities of three groups (P<0.05). Highly significant reduction was observed in the fish oil with B12. This study suggested the use of dietary supplements with fish or seal oil with B12 can reduces the menstrual discomfort.

Tseng.Y.F, et, al., (2005) performed a randomized controlled trial to determine the effectiveness of drinking rose tea as an intervention for reducing pain and psycho physiologic distress in adolescents with primary dysmenorrhea, 130 female adolescents were randomly assigned to an experimental (n=70) and a control (n=60) group. Compared with the control group, the experimental group perceived less menstrual pain, distress, and anxiety. Findings suggest that drinking rose tea is safe and simple treatment for dysmenorrhea.

Ziaei, et al., (2004) Conducted a randomised, double-blind, placebo-controlled trial on the effect of vitamin E in the treatment of primary dysmenorrhoea in a school in Tehran. 278girls aged between 15-17 years with dysmenorrhea were selected. Participants were given 200units of vitamin E or placebo twice a day. A visual analogue scale (VAS) was used to record pain, and a validated Pictorial Blood Loss Assessment Chart (PBLAC) to measure menstrual loss. VAS score (3 *vs* 5, *P* >

0.001) and four months (0.5 *vs* 6, *P* > 0.001), pain duration was shorter at two months (mean 4.2 [7.1] hours *vs* 15 [17], *P* > 0.001) and at four months (1.6 [4.0]hours *vs* 17 [18] hours, *P* > 0.0001), and blood loss assessed by PBLAC score was lower at two months (54 [31] *vs* 70 [40], *P* > 0.0001) and at four months (46 [28] *vs* 70 [37], *P* >0.0001). Vitamin E relieves the pain of primary dysmenorrhoea an reduces blood loss.

III. LITERATURE RELATED TO MINT LEAVES ON DYSMENORRHEA

Dinesan.C., (2011) explained that medical uses for mint leaves. It can relieve nausea caused by morning sickness and menstrual cramps by relaxing the smooth muscles of abdominal cavity. It has the potentiality to reduce the post operative nausea and muscle aches. Heartburn can be relieved through its antispasmodic activity and increasing the flow of digestive fluids and used as remedy for bad breath. It has antispasmodic activity and sedative properties which can ease tension during pain and muscle aches.

Sydney .G.T., (2010) conducted a study to assess the effect of mint extract on muscle pain and blood lactate levels among 16 students. The group selected for the intervention was given the mint extract of 5ml and the effect on the muscle pain and

blood lactate levels was recorded. The findings shows a considerable reduction in the muscle pain and blood lactate levels ($P<0.01$) levels.

Annie joseph., (2010) conducted a study to assess the effectiveness of mint leaves paste on dysmenorrhea among the adolescent girls. There was a significant reduction in the post test dysmenorrhea score of experimental group than the post test dysmenorrhea score of control group $t = 4.01$ ($P<0.01$). There was no significant association between the mean difference in dysmenorrhea score after mint leaves paste admnistration .

Nazeer .K, et al., (2009) reported the reduction in primary dysmenorrhea among 180 female students at Isfahan university dormitory aged 18-17 year, who suffered from dysmenorrhea. The administration of herbal drug, which involves purified saffron, mint leaves, celery seed, and anise extract obtained a statistically significant reduction in pain scores ($P<0.001$).

Ramya.M., (2009) conducted study to assess the effectiveness of the mint extract upon dysmenorrhea .The level of symptoms on dysmenorrhea was assessed before and after mint extract administration for consecutive days using self administered questionaire. The difference between the experimental pre test

and post test is found to be statistically proven to be significant ($p<0.001$). There was no significant association between the selected demographic variables and pre test post test level of dysmenorrhea score.

Okusanya.B.O., (2008) conducted prospective questionnaire based study on prevalence of dysmenorrhea and mint tea associated factors among undergraduates in a Nigerian University. The findings shows that the prevalence of dysmenorrhea 76.3%. Where the Primary dysmenorrhea was to be more common in the adolescent girls. There is significant pain reduction by using mint tea (P=0.76).

Brncik .C., (2007) evaluated the use of peppermint to relieve irritable bowel syndrome, in Italy. Peppermint oil capsules were administered to the patients suffered from irritable bowel syndrome. Seventy five percent of patients who took peppermint oil capsules for four week showed a major reduction in symptoms as compared with only 38% of patients who took a placebo pill. Peppermint oil's effect of blocking calcium channels thus relaxing the smooth muscles of the intestinal walls, may be the reason for the efficacy against irritable bowel syndrome symptoms.

Shah.K, et al., (2004) explained the medicinal uses and pharmacological effects of mint leaves. It was found that it is

widely used in the food cosmetics and medicines. It is used to relieve common cold, irritable bowel syndrome, dyspepsia, nausea, head ache and as atopical analgesics. This mint leaves are generally identified as safe herb to consume without any side effects.

CHAPTER-III

RESEARCH METHODOLOGY

Research methodology indicates the general patterns of organizing the process for gathering the valid and reliable data for an investigation. This chapter deals with the methodology adopted by the researcher for the study. It includes research approach,research design,setting of the study, population,sample size and sampling technique.

RESEARCH APPROACH

A quantitative approach was used to assess effectiveness of mint extract upon dysmenorrhea among adolescent girls in selected school.

RESEARCH DESIGN

Quasi -experimental one group pre test and post test design was adopted to evaluate the effectiveness of mint extract upon dysmenorrhea among the adolescent girls.Research design represented following diagramaticaly.

R O1 X O2

R - Randomization.

X - Administration of mint extract upon dysmenorrhea.

O1 - Pre test for the assessment of adolescent girls.

O2 - Post test for the assessment of effectiveness of mint extract.

RESEARCH SETTING

It refers to the physical location and condition in which data collection taken place in the study.The study was conducted in Govt Girls Higher Secondary School, Acharapakkam at kanchipuram district.

POPULATION

The population of the study includes adolescent girls (12-17years) who had been identified as having dysmenorrhea.

SAMPLE SIZE

Sample size was 60 adolescent girls with dysmenorrhea.

SAMPLE TECHNIQUE

Simple random sampling technique had been adopted in the study.

SAMPLING CRITERIA

It includes inclusion and exclusion criteria;

INCLUSION CRITERIA

- The girls who are having regular menstrual cycle(ie 28-30days).

- The girls who are available at the time of data collection.
- The girls who are not taking any medicine for pain.

EXCLUSION CRITERIA

- The girls who had not attained the menarche.
- The girls who are taking other remedies for dysmenorrhea.
- The girls who are not willing to participate.

DESCRIPTION OF TOOL

PART I

Demographic variables.

PART II

Simple descriptive pain scale.

Part-III

Rating scale for symptoms of dysmenorrhea.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data collected from 60 samples of adolescent girls with dysmenorrhea at Govt Girls Higher Secondary School at Acharapakkam. It deals with description of tool, report of the pilot study. reliability, validity and informed consent, scoring procedure, scoring interpretation, data collection procedure and statistical method.

This study had been done by using simple descriptive pain scale, rating scale for assessing the symptoms of dysmenorrhea. Data analysis was done by using descriptive and inferential statistic procedure. The item had been scored after assessment and evaluation and the results had been tabulated. The statistical methods used for analysis were mean, standard deviation, two sample 't' test and chi-square test.

DESCRIPTION OF THE TOOL

The instrument was classified into 3 parts.

PART I

Demographic variables

It consists of demographic variables such as age, religion, type of family, age of menarche, length of menstrual cycle

in days, family history of dysmenorrhea, number of sanitary pad changed per day, presence of hormonal disturbance, food pattern, and weight.

PART II

Simple descriptive pain scale

It consists of simple descriptive pain scale, used to assess the level of pain.

Part-III

Rating scale for symptoms of dysmenorrhea

It consist of rating scale used to assess the symptoms of dysmenorrhea.

REPORT OF PILOT STUDY

Prior permission from the authorities was obtained and individual consent taken from the six samples selected for the study .The pilot study was conducted at St. Joseph matriculation higher secondary school in Madurantakam for a period of two weeks. The dysmenorrhea symptoms assessment rating scale was checked for the reliability, validity, feasibility and practicability which was evaluated by experts of the Research committee. Probability simple random sampling technique had been used. Six samples had been taken and by using the rating scale the health condition of the adolescent girls were assessed and the mint

extract was given and data was evaluated. The result of the pilot study showed that there was a positive correlation between dysmenorrhea symptoms on adolescent girls and the study was found to be feasible.

VALIDITY

The tool was prepared by the investigator based on literature review, under the guidance of experts and on the basis of objectives, which had been assessed and evaluated and approved by experts of Research committee. The content validity of the tool was obtained from Research experts from the obstetrics and gynaecological nursing.

RELIABILITY

The assessment tool was developed by the investigator based on the review of literature which was evaluated and approved by the experts of the Research committee. Reliability was checked by experts .The reliability was (0.72). Reliability and practicability of the tool was tested through the pilot study and used for main study.

INFORMED CONSENT

The dissertation committee prior to the pilot study approved the Research proposal. Permission from the Headmaster of the school was obtained. A written consent was

taken from the study participant students and parents obtained before starting the data collection. Assurance was given to students that confidentiality would be maintained.

DATA COLLECTION PROCEDURE

The main study was conducted at Govt Girls Higher Secondary School at Acharapakkam.The Researcher introduced herself and maintained good rapport and made the student to co-operate and accepted as study participants, who met the inclusion criteria were selected by using simple ramdom sampling method . The demographic data were collected from the students.Simple descriptive pain intensity scale and rating scale was used to assess the level of pain and symptoms of dysmenorrhea.The duration of interview ranged from 15-25mins and the written consent was obtained from the participants.The mint extract was given for seven consecutive days.post test was done to evaluate the mint extract upon dysmenorrhea after the next menstrual cycle.

SCORE INTERPRETATION

PART II

The instrument of part II consist of simple descripitive pain intensity scale is used to assess the level of pain .

Score – 1 Red colour No pain

Score - 2 Yellow colour Mild pain

Score – 3 Blue colour Moderate pain

Score – 4 Green colour Severe pain

Score – 5 Pink colour Very severe pain

Score – 6 Orange colour Worst pain

The score was interpreted as follows

$$\text{Score interpretation} = \frac{\text{Obtained score}}{\text{Total score}} \times 100$$

Part-III

The instrument consists of thirty symptoms of dysmenorrhea. The maximum score 4 and minimum score is 1. Based on the scoring the percentage of dysmenorrhea was calculated using the formula

The score was interpreted as follows

$$\text{Score interpretation} = \frac{\text{Obtained score}}{\text{Total score}} \times 100$$

Mild	<50%
Moderate	51 – 75%
Severe	>75%

STATISTICAL METHOD

The descriptive statistical analysis and inferential statistical analysis methods were used to find out the percentage, mean, standard deviation, Paired t test and chi square was adopted and interpreted with each score and health progress results has found for adolescent girls with dysmenorrhoea.

Table: 4.1

S.NO	DATA ANALYSIS	METHODS	REMARKS
1.	Descriptive analysis	The total number, percentage, mean and standard deviation.	To describe demographic variables of adolescent girls with dysmenorrhea.
2.	Inferential analysis	Paired ‘ t ’ test Chi square	Analyzing the effectiveness of mint extract. Analyzing the association between demographic variables and the effectiveness mint extract Upon adolescent girls with dysmenorrhea.

DATA ANALYSIS AND INTERPRETATION DONE UNDER THE FOLLOWING SECTIONS

SECTION –A

Frequency and percentage distribution of demographic variables of adolescent girls with dysmenorrhea.

SECTION – B

Frequency and percentage distribution of assessments score and evaluation score of adolescent girls with dysmenorrhea.

SECTION – C

Comparison between mean and standard deviation of assessment score and evaluation score of adolescent girls with dysmenorrhea

SECTION – D

Mean and standard deviation of improvement score for assessment score and evaluation score and the effectiveness of mint extract upon adolescent girls with dysmenorrhea.

SECTION – E

Analyzing the association between demographic variables and effectiveness of mint extract upon adolescent girls with dysmennorhea.

SECTION –A

TABLE 4.2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF ADOLESCENT GIRLS WITH DYSMENORRHEA

N=60

S.No	DEMOGRAPHIC VARIABLES	NUMBER	%
1.	**Age in years**		
	a. 12-13years	**2**	**3.33**
	b. 14-15years	**46**	**76.67**
	c. 16-17years	**12**	**20.00**
2.	**Religion**		
	a. Hindu	**52**	**86.67**
	b. Christian	**6**	**10.00**
	c. Muslim	**2**	**3.33**
	d. Others	**0**	**0.00**
3.	**Type of family**		
	a. Nuclear family	**50**	**83.33**
	b. Joint family	**10**	**16.67**
4.	**Age of menarche**		
	a. 11-12 years	**14**	**23.33**
	b. 13-14 years	**30**	**50.00**
	c. 15-16 years	**16**	**26.67**

5.	**Length of menstrual cycle in days** a. 24 b. 26 c. 28 d. 30	**7** **33** **4** **16**	**11.67** **55.00** **6.67** **26.67**
6.	**The number of sanitary pads changed per day** a. Below 3 b. 3 - 5 c. Above 5	**7** **24** **29**	**11.67** **40.00** **48.33**
7.	**Family history of dysmenorrhea** a. Present b. Absent	**53** **7**	**88.33** **11.67**
8.	**Presence of hormonal disturbance** a. Yes b. No	**7** **53**	**11.67** **88.33**
9.	**Food pattern** a. Vegetarian b. Non vegetarian	**19** **41**	**31.67** **68.33**
10.	**Weight in kilogram** a. Below 40kg b. 41 – 50kg c. Above 51kg	**36** **21** **3**	**60.00** **35.00** **5.00**

Table 4.2 depicts the frequency and percentage distribution of demographic variables of adolescent girls with dysmenorrhea. Out of 60 students, two (3.33%) were under the age between 12-13 years, 46 (76.67%) were in 14-15 years, 12 (20.0%) in 16-17years. Regarding the religion 52 (86.6%) were Hindu, six (10%) Christian, two (3.3%) Muslim. Type of family reveals about 50 (83.3%) belonged to nuclear family, 10 (16.7%) belonged to joint family. Regarding the length of menstrual cycle in days 24days were seven (11.6%), 26days 33(55.0%), 28days four(6.6%), and 30days were 16(26.6%). Out of 60 sdolescent girls53(88.3%) belong to family history of dysmenorrhea. Regarding the food pattern 19 (31.6%) vegetarian, 41 (68.3%) non-vegetarian. Regarding the number of sanitary pad below 3 per day were seven (11.6%), 3-5 pads were 24 (40%), above five were 29 (48.3%).Regarding hormonal disturbance seven (11.6%), 53 (83.3%) had not. Regarding weight in kilograms 36 were below 40kg (60%),21 were 41-50kg (35%), there above 51kg three (5%).

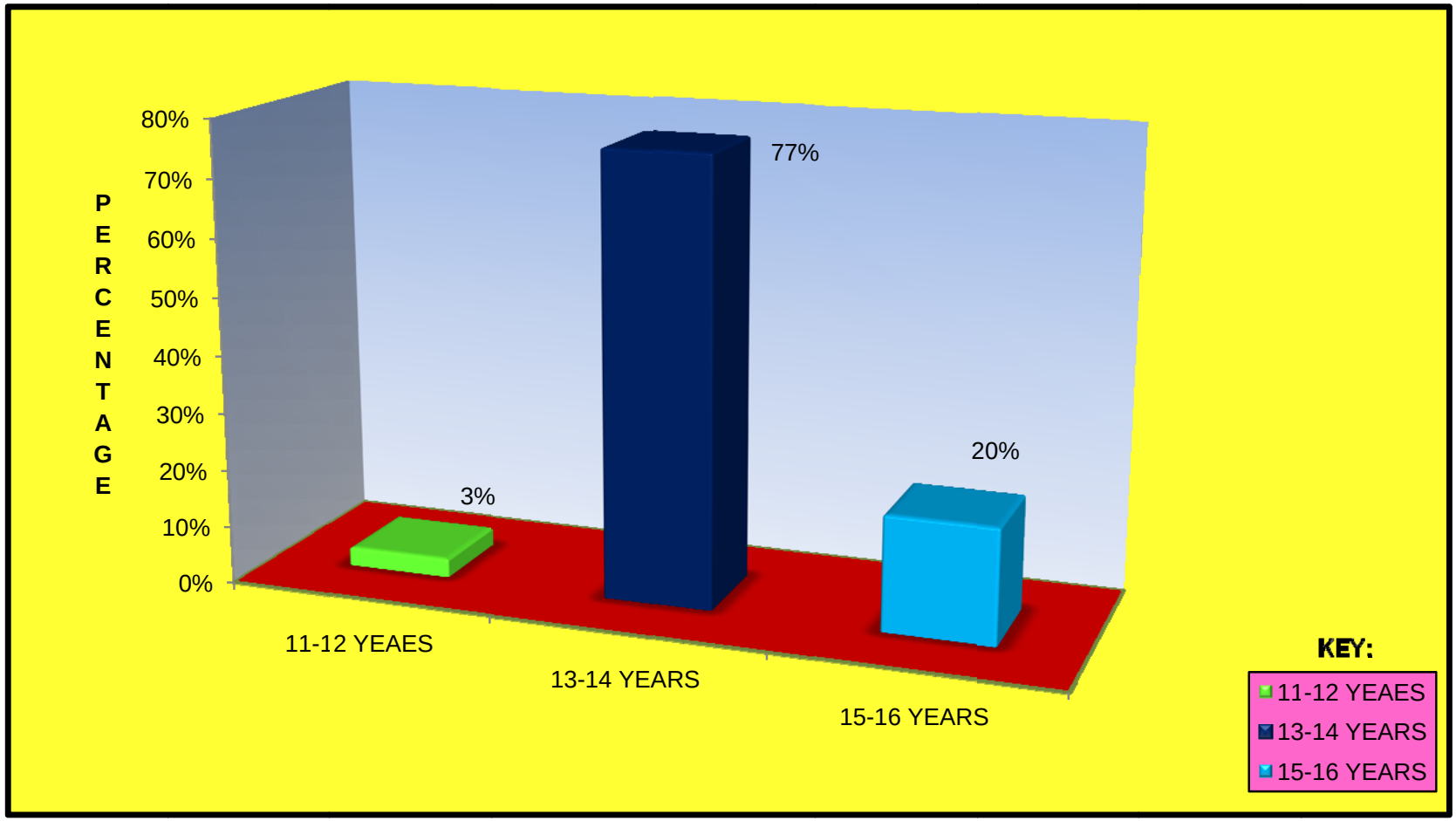


Figure 4.1: percentage distribution of adolescent girls with dysmenorrhea based on age

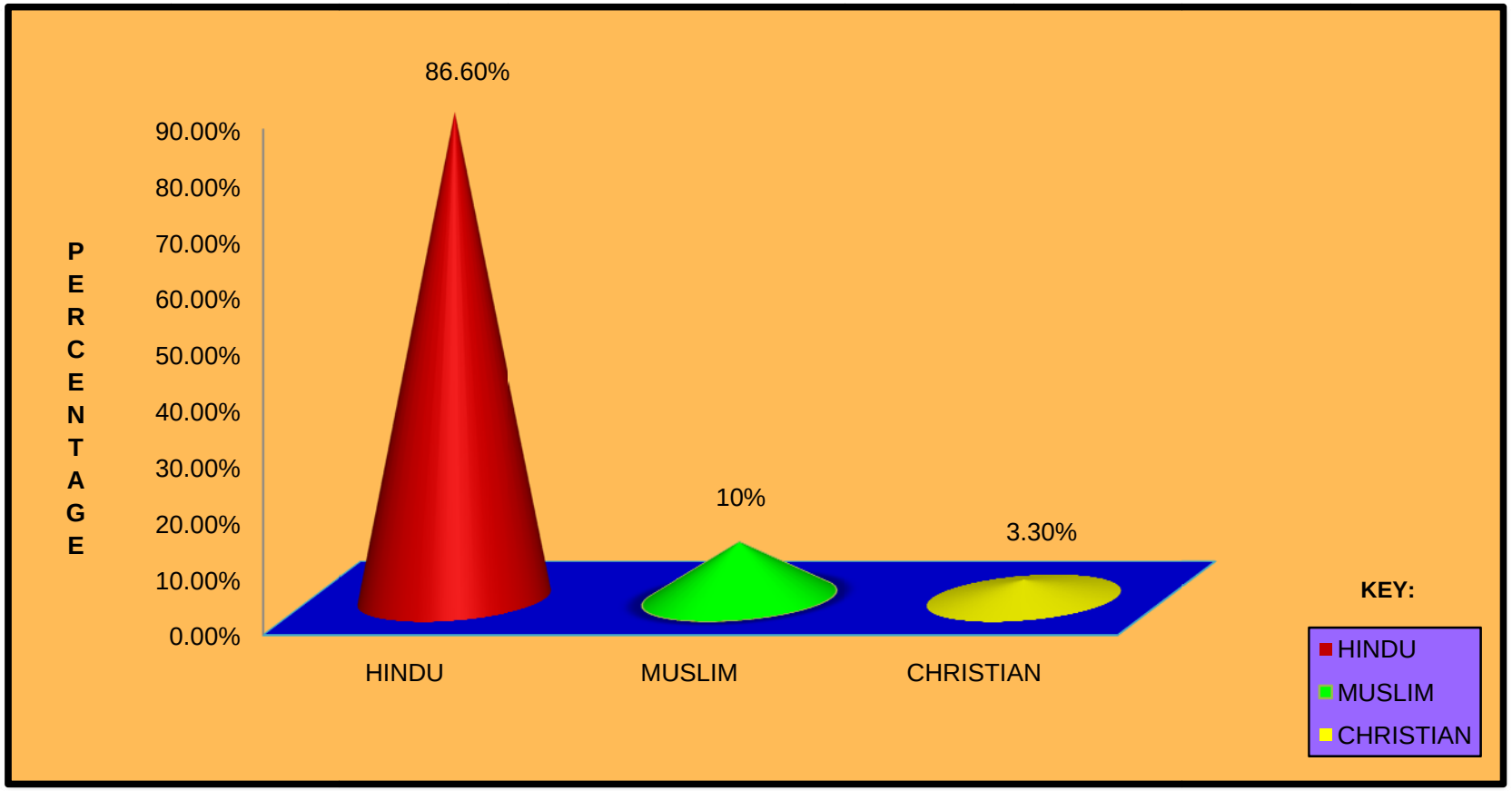


Figure 4.2 : Percentage distribution of adolescent girls with dysmenorrhea based on religion

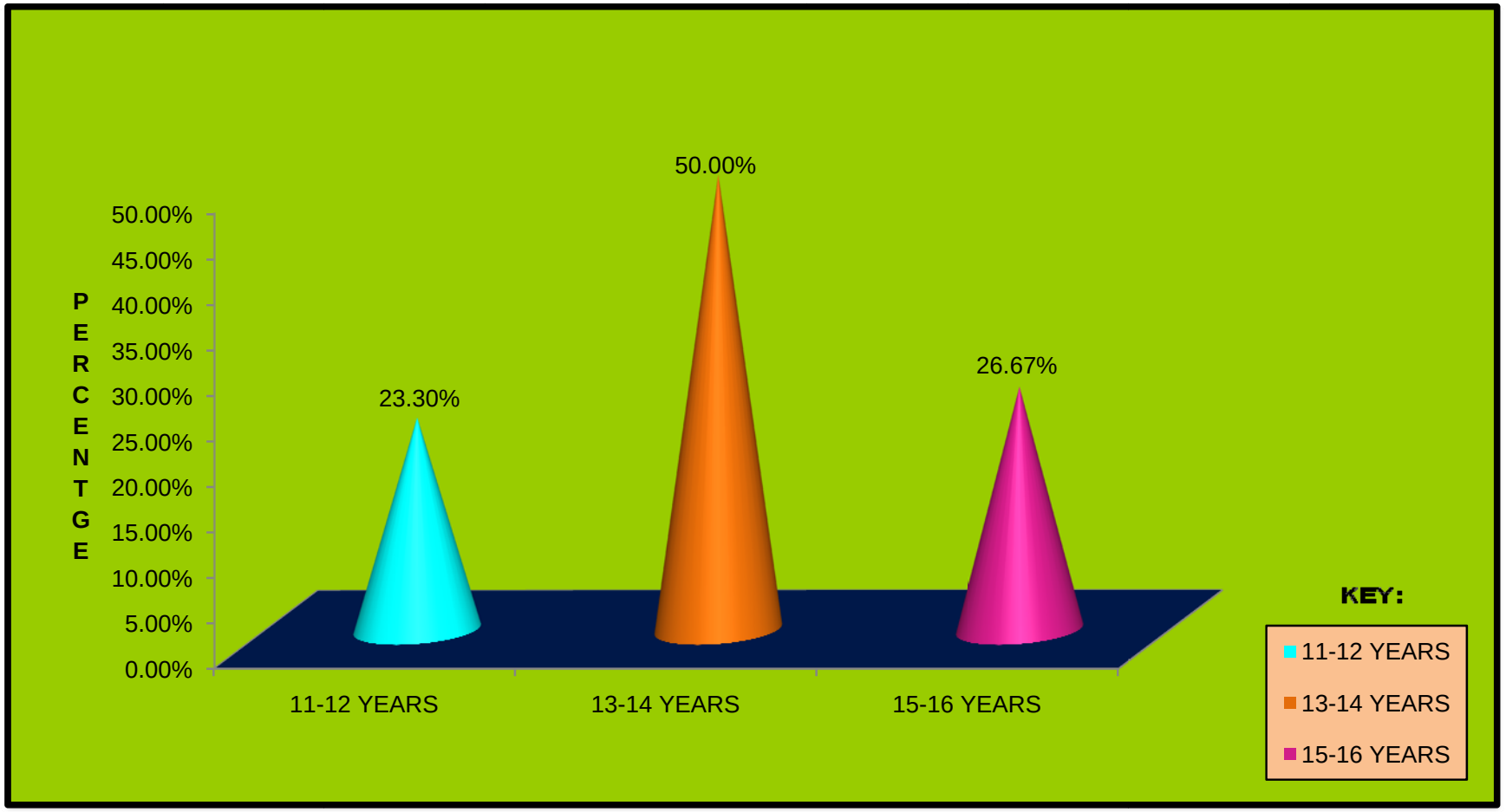
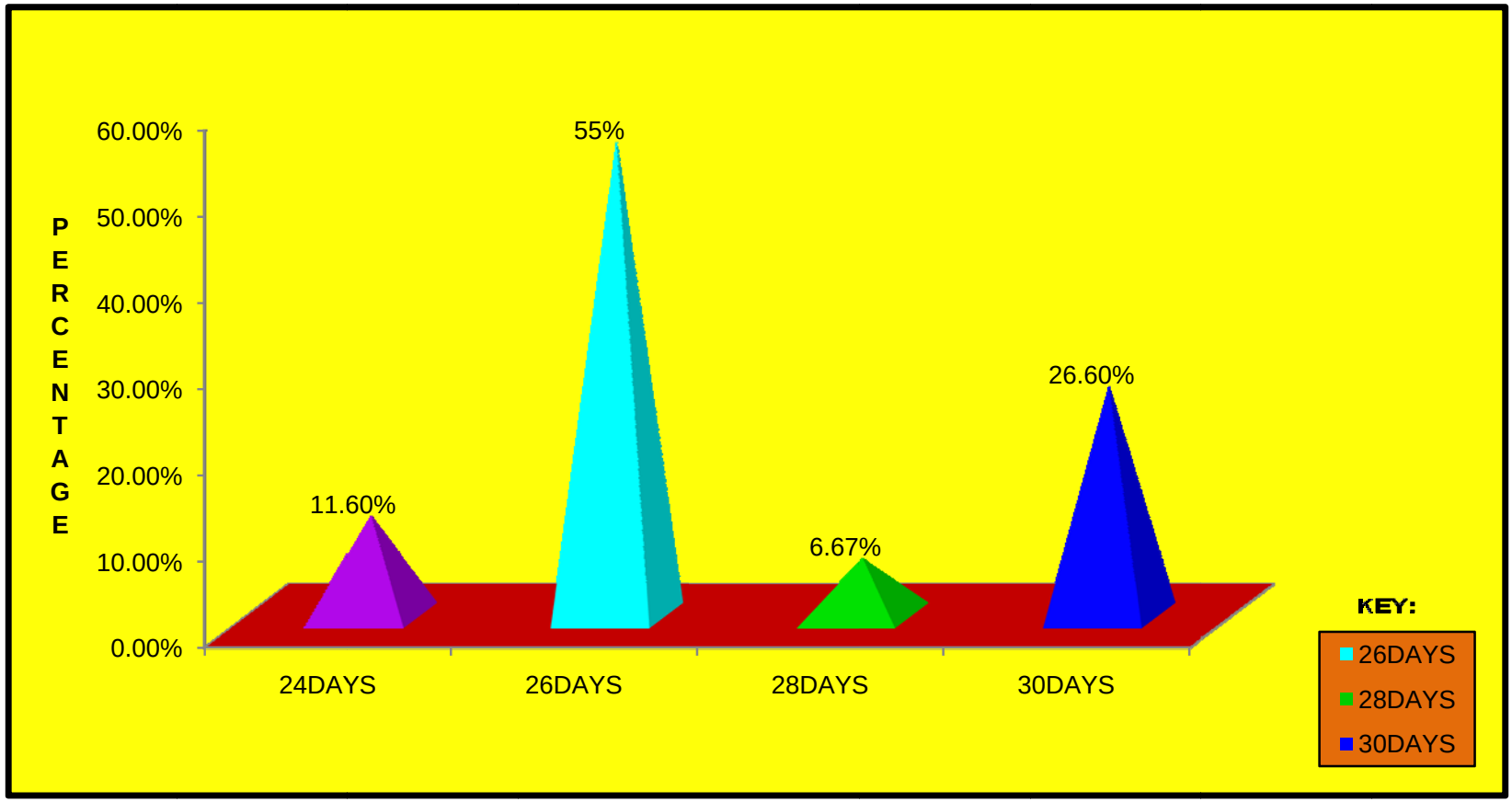


Figure 4.3: percentage distribution of adolescent girls with dysmenorrhea based on age of menarche



Figur 4.4: percentage distribution of adolescent girls with dysmenorrhea based on menstrual cycle

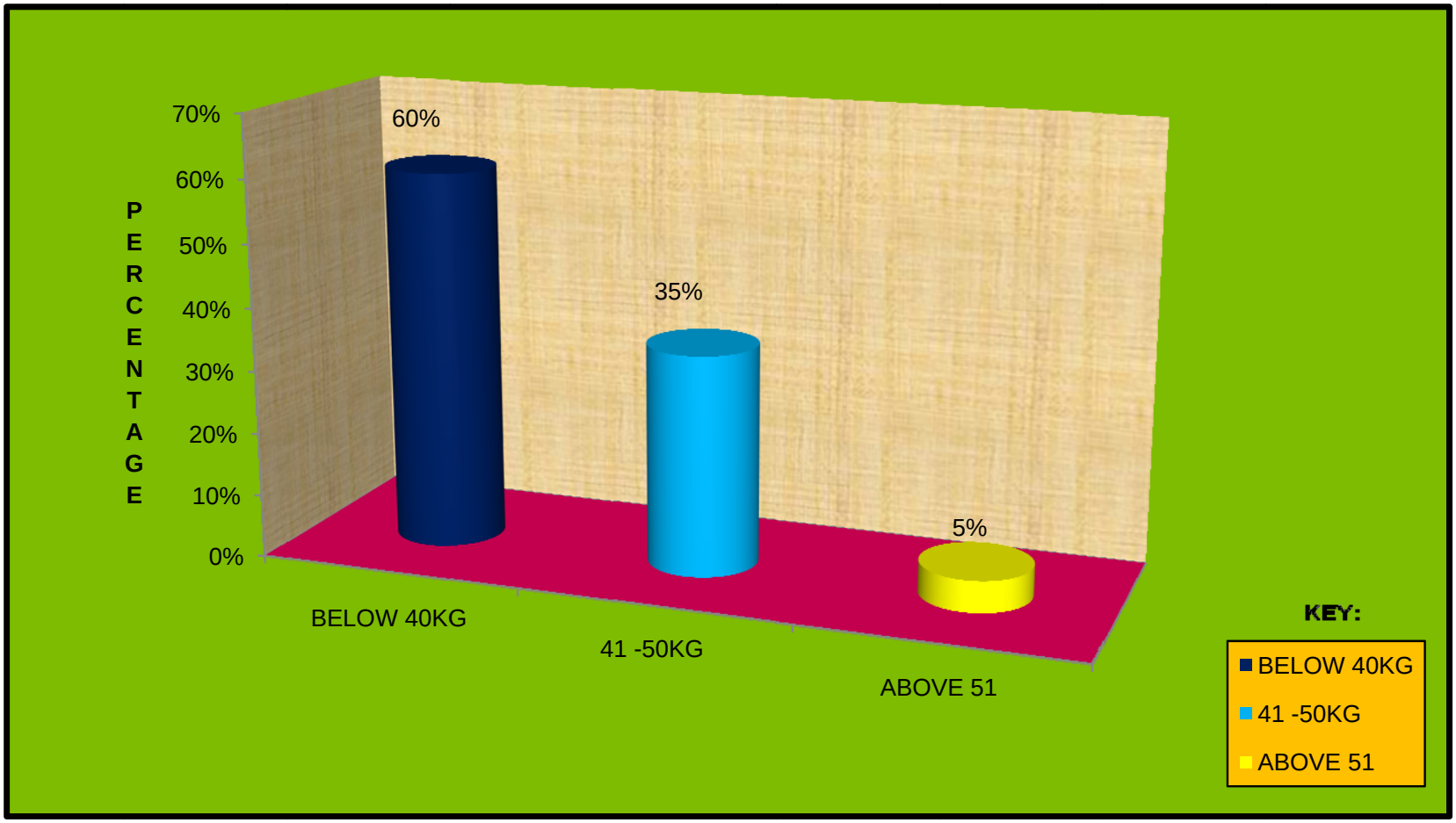


Figure 4.5:percentage distribution of adolescent girls with dysmenorrhea based on weight

SECTION – B

TABLE – 4.3 : FREQUENCY AND PERCENTAGE DISTRIBUTION OF ASSESSMENT SCORE AND EVALUATION SCORE OF ADOLESCENT GIRLS WITH DYSMENORRHEA.

N=60

HEALTH STATUS OF ADOLESCENT GIRLS	MILD		MODERATE		SEVERE		TOTAL	
	No	%	No	%	No	%	No	%
PRE TEST	0	0	23	38.3	37	61.7	60	100
POST TEST	33	55	27	45	0	0	60	100

Table 4.3 shows that the health status of the adolescent girls with dysmenorrheal. On assessment score 23 (38.3%) were under moderate dysmenorrhea, 37(61.7%) were under severe dysmenorrhea. 33 (55%) were under mild dysmenorrhea, 27(45%) were under moderate dysmenorrhea.

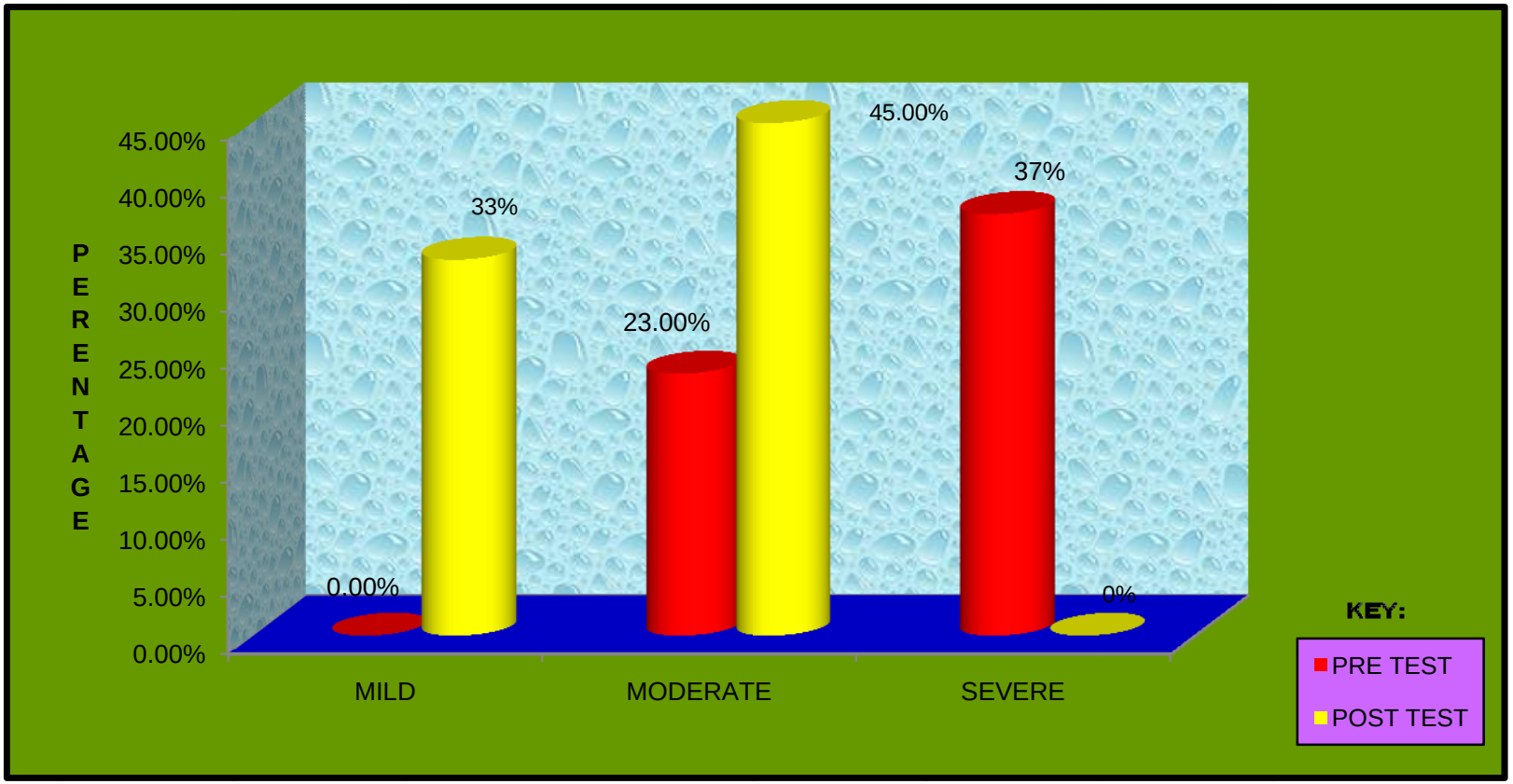


Figure 4.6:percentage distribution of assessment score and evaluation score of adolescent girls with dysmenorrhea

SECTION – C

TABLE - 4.4: COMPARISON BETWEEN MEAN AND STANDARD DEVIATION OF ASSESSMENT SCORE AND EVALUATION SCORE OF ADOLESCENT GIRLS WITH DYSMENORRHEA

N=60

S.NO	ADOLESCENT GIRLS WITH DYSMENORRHEA	MEAN	STANDARD DEVIATION	95% CONFIDENCE INTERVAL
1	**PRE TEST**	93.35	6.43	91.72-95.12
2.	**POST TEST**	60.25	5.67	58.81-61.68

Table 4.4 shows that the overall mean of adolescent girls with dysmenorrhea is 93.35 and the standard deviation of 6.4 with the confidence interval of 61.7%during pre test assessment. In post test evaluation the mean is 60.2 and the standard deviation of 5.67 with the confidence interval of 61.7%.

SECTION – D

TABLE – 4.5: MEAN AND STANDARD DEVIATION OF IMPROVEMENT IN ASSESSMENTSCORE AND EVALUATION SCORE FOR EFFECTIVENESS OF MINT EXTRACT ON ADOLESCENT GIRLS WITH DYSMENORRHEA

N=60

S. NO	HEALTH STATUS OF CHILDREN	MEAN	STANDARD DEVIATION	't' VALUE
1.	**Improvement score**	33.10	6.96	36.81

P < 0.05.

Table 4.5 reveals that the mean and standard deviation of improvement score for effectiveness of mint extract upon dysmenorrhea among adolescent girls. The improvement score of mean value was 33.10 with the standard deviation of 6.96 and the 't' test value was 36.81 which was statistically significant.

SECTION – E

TABLE –4.6: ANALYZING THE ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND EFFECTIVENESS OF MINT EXTRACT UPON DYSMENORRHEA AMONG ADOLESCENT GIRLS

N=60

S.No	DEMOGRAPHIC VARIABLES	POST TEST SCORE						χ^2
		MILD		MODERATE		SEVERE		
		NO	%	NO	%	NO	%	
1.	Age in years							
	a. 12-13 years	1	2	1	2	0	0	0.18
	b. 14-15 years	26	4	20	33	0	0	NS
	c. 16-17 years	6	10	6	10	0	0	
2.	Religion							
	a. Hindu	31	52	21	55	0	0	4.03
	b. Christian	2	3	4	7	0	0	NS
	c. Muslim	0	0	0	3	0	0	
3.	Type of family							
	a. Nuclear	27	45	23	38	0	0	0.12
	b. Joint	6	10	4	7	0	0	NS

4.	**Age of menarche**							
	a. 11-12 years	**8**	**13**	**6**	**10**	**0**	**0**	**2.84**
	b. 13-14 years	**19**	**32**	**11**	**18**	**0**	**0**	**NS**
	c. 15-16 years	**6**	**10**	**10**	**17**	**0**	**0**	
5.	**Length of menstrual cycle in days**							
	a. 24	**3**	**5**	**4**	**7**	**0**	**0**	
	b. 26	**3**	**5**	**1**	**2**	**0**	**0**	**1.07**
	c. 28	**18**	**30**	**15**	**25**	**0**	**0**	**NS**
	d. 30	**9**	**5**	**7**	**12**	**0**	**0**	
6.	**The number of sanitary pads changed per day**							
	a. Below 3	**6**	**10**	**1**	**2**	**0**	**0**	**7.40***
	b. 3-5	**16**	**27**	**8**	**13**	**0**	**0**	**S**
	c. Above	**11**	**18**	**18**	**30**	**0**	**0**	
7.	**Family history**							
	a. Present	**27**	**45**	**26**	**43**	**0**	**0**	**3.02**
	b. Absent	**6**	**10**	**1**	**2**	**0**	**0**	**NS**
8.	**Weight in kg**							
	a. Below 40 kg	**19**	**32**	**17**	**28**	**0**	**0**	**0.27**
	b. 41-50 kg	**12**	**20**	**9**	**15**	**0**	**0**	**NS**
	c. Above 51 kg	**2**	**3**	**1**	**2**	**0**	**0**	

NS- NON SIGNIFICANT **S- SIGNIFICANT**

Table 4.6 that implies that there is significant association between the effectiveness of mint extract upon dysmenorrhea with the number of sanitary pads changed per day. And there is no significant association between other demographic variables like age, religion, type of family, age of menarche, length of menstrual cycle, family history, food pattern, and weight.

CHAPTER –V

RESULTS AND DISCUSSION

The aim of the study was to assess the effectiveness of mint extract upon dysmenorrhea among adolescent girls. A total number of 60 students had been selected for the study. The pretest was conducted using by a simple descriptive pain scale, and rating scale on symptoms of dysmenorrhea and the mint extract was given to the students for seven consecutive days, three days before menstruation and four days after menstruation. After that post assessment was done with the same tool to evaluate the effectiveness of mint extract. The study was proved that mint extract has brought changes in the reduction of dysmenorrhea.

The first objective was to assess the level of pain and symptoms during dysmenorrhea among the adolescent girls in control and experimental group of students.

The students who met the inclusion criteria had been selected from Govt.Girls Higher Secondary School at Acharapakkam, and each of them was assessed with the demographic variables and their symptoms of dysmenorrhea was assessed by using the rating scale and pain scale. The data

analysis showed that out of 60 school students. 23 (38.3%) were under moderate dysmenorrhea, 37(61.7%) under severe dysmenorrhea.In pretest the overall mean was 93.3 with the standard deviation of 6.4.

The second objective was to evaluate the effectiveness of mint extract on dysemonerrhea among the adolescent girls in experimental group of students.

In the post test ,33 (55%) were under mild dysmenorrhea, 27(45%) under moderate dysmenorrhea. The overall mean was 60.2 with the standard deviation of 5.6. The improvement score of mean value is 33.1 with the standard deviation of 6.9 and the 't' value is 36.8 which is statistically significant.

Ramya. M., (2009) conducted study to assess the effectiveness of the mint extract upon dysmenorrhea. The level of dysmenorrhea was assessed before and after mint extract administration for consecutive days using self administered questionaire. The difference between the experimental pre test and post test is found to be statistically proven to be significant ($p<0.001$). There was no significant association between the selected demographic variables and pre test post test level of dysmenorrhea score

The third objective was to associate between the effectiveness of mint extract on dysmenorrhea with selected demographic variables for control group and experimental group of students

Table 4.7 that implies that there is significant association between the effectiveness of mint extract upon dysmenorrhea with the number of sanitary pads changed per day. And there is no significant association between other demographic variables like age, religion, type of family, age of menarche, length of menstrual cycle, family history, food pattern, and weight in kilogram.

CHAPTER –VI

SUMMARY & CONCLUSION

SUMMARY

The present study was conducted to assess the effectiveness of mint extract upon dysmenorrhea among adolescent girls. Quasi experimental research design was used for this study. 60 students. who met inclusion criteria had been selected from Govt Girls Higher Secondary School at Acharapakkam, by using simple random sampling technique. The investigator first introduced herself to the students and developed a rapport with them. The pre test was conducted with the simple descriptive pain scale and rating scale on symptoms of dysmenorrhea then the mint extract was administered. After one month the post test was done using the same pain scale and rating scale on symptoms of dysmenorrhea. The data collected had been grouped and analyzed by using descriptive statistics and inferential statistics.

CONCLUSION

In pretest out of 60 school students, 23 (38.3%) were under moderate dysmenorrhea, 37(61.7%) under severe dysmenorrhea. 33 (55%)under mild dysmenorrhea, 27(45%) were

under moderate dysmenorrhea. The ‘t’ test value was 36.81,which was compared with tabulated table value at the level of $P < 0.05$ was significant . So it has been concluded that the mint extract was effective for students with symptoms of dysmenorrhea.

NURSING IMPLICATIONS

The findings of the study has got implications in different branches of nursing profession (ie) nursing practice, nursing education, nursing administration, nursing research. By assessing the effectiveness of mint extract, we can get a clear picture regarding different steps to be taken in all these field to improve the student s of nursing profession.

NURSING PRACTICE

The nurses have favourable offer to educate the student regarding mint extract on symptoms of dysmenorrhea.The study finding also showed that through the participant students aware of symptoms of dysmenorrhea but the majority of them had taken the medical treatment for dysmenorrhea. This shows that health care provider plays a vital role in educating the students regarding dysmenorrhea.

With emerging health care trends, nurses must also know about the naturaceutical supplements and its benefits, health

promoting properties and its availability. This helps the nurse to use the mint extract on dysmenorrhea and recommend in preventing the dysmenorrhic symptoms and many complications. Nurses need evidence based practice in managing the dysmenorrhic symptoms in adolescent girls.

NURSING EDUCATION

Nurse educators when planning and instructing nursing students should be provided with oppurtunities for students to gain the knowledge, in teaching the student should know about the naturacetical supplement .The study outlines the significant of short term courses and inservice education. The nurse educators can make a practical situation for the student nurses on treatment modalities and symptoms.

NURSING ADMINISTRATION

With technology advanced and ever growing challenges of health care needs, the college and hospital administrators have a responsibility to provide continuing education opportunities on naturaceutical supplements and its benefits, health promoting properties and its availability. This will enable the nurses to update their knowledge and to acquire special skill in preparing and use of indigenous system of medicine in nursing, nurse as administrators

should formulate approximate networking so as to facilitate implementation of indigenous system of medicine especially herbal medicine.

NURSING RESEARCH

There is a need for intensive and extensive research in this area. It opens a big avenue for research on innovative methods of creating awareness among the adolescent girls regarding naturacutical supplement and its benefits, health promoting properties and its availability. Encourage further research studies on the effectiveness on mint extract upon dysmenorrhea. Disseminate the finding through conferences, seminars, publications in professional, national, international journals and world wide web.

RECOMMENDATIONS

- The same study can be conducted on a larger sample to generalize the results.
- A similar study can be conducted by using true experimental design.
- Comparative study can be done on different age group of reproductive women.

- The effectiveness of mint extract administration may be assessed upon the level of satisfaction of participants.
- The experimental study was done for new intervention under alternative system of medicine.

BIBLIOGRAPHY

BOOKS

1. Alexander D. Midwifery. 4th edition. Calulta: oxford university press:(1995).

2. Arulkumaran S, Alokendu C, Essentials Of Obstetrics. 3rd edition. New Delhi: Jaypee brothers:(2004).

3. Bevis M, Caring For Women, 5th edition, Newyork: Londonchurchil Livingston publishers :(1997).

4. Bijoy Sree Sengupta et al, Gynaecology for postgraduate and practitioners, 2nd edition, Londan:Elsevier Publication: (1988).

5. Bobak M I, Jensen DM, Maternity And Gynecology Care, 5th edition. Philadelphia: W.B. Saunders company: (1993).

6. Dawn C S, Text book of gynaecology, 3rd edition.Philadeplia: Dawns publication: (2003).

7. Dewhurst s, Text book of obstetrics and Gynaecology of post graduates. 6thedition. Published by Blackwell Science: (1990).

8.Dr.Roger G,Smith D, Netter's Obstetrics, Gynaecologyand women's health.6th edition. Japan: published by IWN LearningSystems: (2002).

9. Dr.Shashane V, Parulekar, Practical Gynaecology And Obstetrics. 2nd edition.Chicago. Vora Medical Publication: (2002).

10. Dutta D.C, *Text Book Of Obstetrics*. 4th edition. Calcutta: New central book agency (p) Ltd:(1998).

11. Edmondy K.D, Text Book To Obstetrics And Gynaecology For Post Graduates. 6th edition. Australia:Blackwell science Pvt. Ltd: (1979).

12. Fraser D, Cooper M, Myles Textbook ForMidwives, 14th edition: London: Churchill Livingstone : (2003),

13. Hawkins, Bourne L, Text Book of Gynecology. 12thedition. B.I. Churchill Livingstone Publications: (1998).

14. Howie D,Keith F, Dewhurst Text Book OfObstetrics And Gynecology For Post Graduates. 6th edition.London: Blackwell science: (1998).

15. Janet Graffin, Kenny P, contemporary womenshealth – A nursing advocacy approach. 2nd edition.Houston: Addison– Wesly publishing company: (1986).

16. John Bourgeois et al., Obstetrics and Gynaecology recall, 2nd edition: Mexico:Published by Williams and Wilkins: (1997).

17. Jones L D, Fundamentals Of Obstetrics And Gynecology, 6th edition: Philadelphia: Mosby publishers: (1998).

18. Klein S, *A Book For* Midwives. 2nd edition: California: The Hesperian foundation: (1996).

19. Libtleton Y L, Engebretson C J, Maternal Neonatal And Women's Health Nursing. 11th edition. Australia:Thomson learning publishers: (2002).

20. Lower milk et al., Maternity and women's health care.12th edition: Mosby publications: (1997).

21. Oumachigiri A, *Clinical Methods In Obstetrics And Gynecology A Problem Based Approach*. 1st edition. NewDelhi: orient longmann: (2003).

22. Reeder J S, Martin L L, Koniak D, Maternity Nursing. 17th edition. Philadelphia: J.B. Lippincott company: (1992).

23. Robinson T, Midwives Research and Child Birth. 3rdedition. Philadelphia: Mosby publishers: (2000).

24. Verney H*, Nurse Midwifery*. 2nd edition. Singapore:Jones and Bartlett publishers: (1987).

25. Potter perry, Fundamentals of Nursing. Mosby Publications: 5th edition: (2002).

26. Stud John, Progress in Obstetrics and Gynecology. Churchilllivingstone. London: 2nd edition: (1996).

27. Sundar Rao, Richard T, An Introduction to Biostatistics; A Manual forStudents in Health Sciences: 3rd edition: Prentice Hall Of India Pvt. Ltd: (1997).

28. Swamynathan S, Handbook of Food and Nutrition. Bangalore: BappcoPublishing Company Ltd. (1992).

JOURNAL REFERENCE

1. Proctor M. Diagnosis and management of dysmenorrhoea. BMJ Journal(Internet): 2006 Jan [cited 2011 April 4]:345(78)

2. Kandelwal et. al., Prevalence of reproductive mobility from general publication and related issues.Journal of obstetrics and gynaecology (Internet): 2002 March[cited 2010 Jan]:89(6)

3. Taylor D. et. al., A randomized clinical trial of the effectiveness of an occupressure device for managingsymptom of dysmenorrhoea. Journal of Alternativecomplement Med(Internet): 2002 Feb[cited 2009 Aug]; 143 (87)

4. Wolf L L (2001) Dysmenorrhoea Journal of the American Academy of Nurse practiotioner (Internet):2006 July[cited 2010 May]: 125 (8)

5. Hewison A Akker, Dysmenorrhoea, menstrual attitude and GP consultation. British Journal of Nursing(Internet):2010 May[cited 2011 Nov] 480(5)

6. Gentz B A, Alternative therapies for the managementof pain.Journal of Clinical Obstetrics and Gynaecology(Internet):2007 feb[cited 2010 Dec]:704(2)

7. Akin MD. et al., Use of continuous low level topicalheat in the treatment of dysmenorrhoea. Journal of Obstetricsand Gynaecology(Internet):2005 July [cited 2009 March]:17(1)

8. Vasantha suresh, Primary dysmenorrhoea. Pondicherry Journal of Nursing(Internet):2006 March[cited 2010 Sep]:23(3)

9. Sushma Danny S. Effectiveness of accupressure on reducing dysmenorrhoea. Journalof NightingaleNursing times(Internet):2004 Aug [cited 2009 may]: 32(4)

10. Navdeep Kaur, Ramesh Thakur,Assess the premenstrual syndrome and management. Nursing andmidwifery research journal(Internet):2007 Sep [cited 2010 Jan] 87(2)

11. Lori M. Dickerson et. al., Premenstural Syndrome. Journal of American family physician(Internet):2004 Oct [cited 2008 Feb]: 71(21)

12. Morhole Joseph , A study of menstrual pattern of collegegirls of pune. Indian Journal of Obstetrics & Gynaecology(Internet):2005 March [cited 2009 Aug]:161(6)

13. Mazyck, Premenstural Syndrome. Journal of Americanfamily physician(Internet):2002 June [cited 2008 Sep]: 743 (52)

14. Abraham S, Menstrual production and menstrualproblem. The medical journal of Australia(Internet):2003 Oct [cited 2005 Nov]:, 247(42)

15. Amonda Milligen, Dysmenorrhoea and management. Nursing time(Internet): 2001 Sep [cited 2009 April]:50(40)

Website

1.http:// www. Googles. Com.

2. htt://www. Medlers. Com.

3.htt://www. Medispeciality. Com

4.htt://www. Pubmed. Com/

5. htt://www.Ezine article.com/?expert=VMM

6.htt://www.Arpan.org.in/csa.htm/anchor csa

7.htt://www.Promolifehealth. Com

8.htt://www.Scenar-america.org.in.

9.htt://www.herbalcom.com

10.htt://www.Medline pluse.com

PART - I

DEMOGRAPHIC VARIABLES PROFORMA

1. Age in years

A. 12-13 years ☐

B. 14-15 years

C. 16-17 years

2. Religion

A. Hindu ☐

B. Christian

C. Muslim

D. Others

3. Type of family

A. Nuclear family ☐

B. Joint family

4. Age of menarche

A. 11-12 years ☐

B. 13-14 years

C. 15-16 years

5. Length of menstrual cycle in days

A. 26 ☐

B. 24

C. 28

D. 30

6. The number of sanitary pad changed per day

A. Below 3 ☐
B. 3 - 5
C. Above 5

7. Family history of dysmenorrhea

A. Present ☐
B. Absent

8. Presence of hormonal disturbance

A. Yes ☐
B. No

9. Food pattern

A. Vegetarian ☐
B. Non vegetarian

10. Weight in kilogram

A. Below 40kg ☐
B. 41 -50 kg
C. Above 50kg

PART - II

SIMPLE DESCRIPTIVE PAIN INTENSITY SCALE

INSTRUCTION:

- Please indicate how much of pain is felt by you.
- Please encircle the number.

DESCRIPTION:

SCORE	LEVEL OF PAIN	CHARACTERISTICS
1.	No pain	Absence of pain.
2.	Mild pain	Pain limited to abdomen and back.
3.	Moderate pain	Pain abdomen radiating to back and thighs.
4.	Severe pain	Pain abdomen radiating to back and thighs interfering with daily activities.
5.	Very severe pain	Pain abdomen radiating to back and thigh required rest limited activity restriction.
6.	Worst possible pain	Pain abdomen radiating to back and thighs required complete rest with full activity restriction.

PART - III

RATING SCALE ON SYMPTOMS OF DYSMENORRHEA:

INSTRUCTIONS:-

- Please respond to all the questions listed below
- Please put (✓) Tick mark against your preferred alternative
- Please do not omit any questions listed below

S.NO	ITEMS	ALMOST NEVER	RARE	MOST OFTEN	ALWAYS
	PHYSIOLOGICAL SYMPTOMS	1	2	3	4
1.	Lower abdominal pain and back pain				
2.	Dizziness				
3.	Vomiting				
4.	Malaise				
5.	Headache				
6.	Breast tenderness				
7.	Constipation				
8.	Diarrhea				
9.	Abdomen bloating				
10.	Uterine cramp				
11.	Stiffness of muscular joints				

12.	Nausea				
13.	Fever				
14.	Lethargy				
15.	sweating				
	PSYCHOLOGICAL				
16.	Depression				
17.	Nervousness				
18.	Anger				
19.	Inability to concentrate				
20.	Crying bouts				
21.	Anxiety				
22.	Irritability				
23.	Insomnia				
24.	Loss of motivation				
25.	Agitation				
26.	Disorientation				
27.	Restlessness				
28.	Tension				
29.	Excitability				
30.	Mood swing				

SCORING KEY:

MILD	**=**	**< 50**
MODERATE	**=**	**51-74**
SEVERE	**=**	**> 75**

PART - IV

RESEARCH PARTICIPANT CONSENT FORM

Dear participant,

I, L.INDUMATHI, M.SC(N).,a student of Adhiparasakthi College of Nursing, Melmaruvathur. As a part of the curriculum of our study a research work on "Effectiveness of mint extract upon dysmenorrhea among adolescent girls in selected school at Acharapakkam, kanchipuram district," has to be conducted. The finding of the study will be helpful in designing the intervention for dysmenorrhea.

I hereby seek your consent and co-operation to participate in the study. Please be frank in your response. The information collected from you will be kept confidential and anonymity will be maintained.

Signature of investigator

I _____ hereby consent to participate in the study

Signature of participant

PART- V

PREPARATION OF MINT LEAVES EXTRACT

INSTRUCTION

- This preparation can be taken in an empty stomach
- No side effects will occur after taking this preparation

INGREDIENTS

- Mint leaves – 5 grams
- pepper- A pinch
- Salt – A pinch
- Coriander leaves

PREPARATION

1. Boil the water up to 15-20min.Add mint leaves in it and filter the extract in a container.
2. Add a pinch of salt , pepper and coriander leaves (100ml)
3. Serve it hot

CONCLUSION

Mint leaves extract is good for health and also effective in the reduction of dysmenorrhea.